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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,402	11/13/2003	Tatsuyuki Tokunaga	1232-5207	9908
27123	7590	10/05/2007		
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			EXAMINER DURNFORD GESZVAIN, DILLON	
			ART UNIT 2622	PAPER NUMBER
			NOTIFICATION DATE 10/05/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOPatentCommunications@Morganfinnegan.com  
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**Office Action Summary**

Application No.

10/713,402

Applicant(s)

TOKUNAGA, TATSUYUKI

Examiner

Dillon Durnford-Geszvain

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/14/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6, 8, 9, 11, 13 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by US 7,061,530 (Koyama).

As to claim 1, Koyama teaches an image sensing apparatus having an image sensor for sensing an image of an object, comprising:

an analog-digital converter 14 (see Fig. 1) that operates at a predetermined frequency and converts an analog signal read from the image sensor to a digital signal; and

a controller 13 that controls a relationship between a phase of the analog signal read from the image sensor and a phase of a timing signal for operating said analog-digital converter in accordance with a peripheral condition of the image sensing apparatus (Column 2 line 65 to Column 3 line 2 and Column 3 lines 44-49).

As to claim 2, see the rejection of claim 1 and note that Koyama further teaches the image sensing apparatus according to claim 1, further comprising a memory (62-64,

see Fig. 5) that stores a plurality of different phases of the timing signal in correspondence with different peripheral conditions in advance,

wherein said controller searches the phase of the timing signal which corresponds to the peripheral condition (Column 7 lines 47-62).

As to claim 3, see the rejection of claim 1 and note that Koyama further teaches the image sensing apparatus according to claim 1, wherein the peripheral condition includes temperature (see Column 7 lines 25-35).

As to claim 4, see the rejection of claim 1 and note that Koyama further teaches the image sensing apparatus according to claim 1, wherein said controller uses the timing signal having a first phase when the peripheral condition is a first condition, and uses the timing signal having a second phase when the peripheral condition is a second condition (see Column 6 lines 15-48 and note that embodiment 3 works in much the same way but it resets every time period  $T_2$ ).

As to claim 6, see the rejection of claim 1 and note that Koyama further teaches the image sensing apparatus according to claim 1, wherein said controller adjusts the relationship between the phase of the analog signal read from the image sensor and the phase of the timing signal so that a digital signal obtained by converting the signal read from the image sensor by said analog-digital converter becomes maximum (see Column 6 lines 15-49 and note that when the noise signal is minimized the signal level will be a

maximum, further note that embodiment 3 works in much the same way but it resets every time period T2).

The limitations of claims **8** and **11** roughly corresponds to claim **6** and is rejected on the same grounds.

Claims **13** and **14** are methods that correspond to claims **1** and **8** respectively and therefore are rejected on the same grounds but directed to a method.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims **1**, **5**, **7**, **8**, **10** and **12** are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,160,578 (Carroll).

As to claim **1**, Carroll teaches an image sensing apparatus having an image sensor for sensing an image of an object, comprising:

an analog-digital converter (comprising 22', 22'', 23' and 23'', see Fig. 3 and Column 9 lines 33-48) that operates at a predetermined frequency and converts an analog signal read from the image sensor to a digital signal; and

a controller 26' that controls a relationship between a phase of the analog signal read from the image sensor and a phase of a timing signal for operating said analog-

digital converter in accordance with a peripheral condition of the image sensing apparatus (Column 10 lines 39-67 and Column 11 lines 9-50).

As to claim 5, see the rejection of claim 1 and note that Carroll further teaches the image sensing apparatus according to claim 1 further comprising:

a plurality of output units that read signals from the image sensor (not shown, but comprising at least vertical CCDs as the imager used in the apparatus of Carroll is a CCD); and

a multiplexer that multiplexes the signals from said plurality of output units to a time sequential signal and outputs the time sequential signal (Column 9 lines 13-23 and note that the signals "RGRG" and "GBGB" of Fig. 3 are multiplexed signals),

wherein the time sequential signal from said mutliplexer is outputted to said analog-digital converter (see Fig. 3).

As to claim 7, see the rejection of claim 5 and note that Carroll further teaches image sensing apparatus according to claim 5, wherein said controller adjusts the relationship between the phase of the analog signal read from said image sensor and the phase of the timing signal so that a difference between the signals from said plurality of output units becomes minimum (see Column 9 line 6 to Column 10 line 8 and note that the setting of the clocks entails setting them so that the difference in the signals that were multiplexed is a minimum so that the video can be reconstructed).

As to claim **8**, Carroll teaches an image sensing apparatus having an image sensor for sensing an image of an object, comprising:

an analog-digital converter (comprising 22', 22'', 23' and 23'', see Fig. 3 and Column 9 lines 33-48) that operates at a predetermined frequency and converts an analog signal read from the image sensor to a digital signal; and

a controller that controls a relationship between a phase of the analog signal read from the image sensor and a phase of a timing signal for operating said analog-digital converter on the basis of a comparison between signals obtained by relatively shifting the phase of the analog signal and the phase of the timing signal, and converting the analog signal by said analog-digital converter for each phase (Column 10 lines 39-67, Column 11 lines 9-50 and Column 12 lines 13-25).

Claims **10** and **12** correspond to claims **5** and **7** but depend from claim **8** and therefore are rejected on the same grounds as claims **5** and **7** but depending from claim **8**.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dillon Durnford-Geszvain whose telephone number is (571) 272-2829. The examiner can normally be reached on Monday through Friday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dillon Durnford-Geszvain

9/27/2007



LIN YE  
SUPERVISORY PATENT EXAMINER